

REMARKS

This Amendment and Response is filed in reply to the Office Action dated May 22, 2001. The issues presented in the May 22, 2001 Office Action are addressed below with reference to the Office Action.

With regard to the Office Action, paragraphs 1 and 2: The Examiner states that claims 31, 32, 41, and 42 introduced "an accuracy measure" that was previously not disclosed, and further, claims 33 and 43 introduce re-training of the neural network, "which was not previously disclosed."

Applicants direct Examiner to the Summary section, page 9, line 25, that states "(v) automatically *retraining* the neural network..." (emphasis added), while Summary section, page 10, lines 10-11 indicate "(iii) comparing the output values with their respective target values to produce a *value indicative of the accuracy* of the output values." (emphasis added) It does not require one of ordinary skill in the art, but rather one of mere knowledge of the English language, to understand that "a value indicative of the accuracy" could be otherwise stated as an "accuracy measure." Furthermore, beyond the specific reference to retraining already provided, further references to retraining can be found at page 18 line 4, page 19 line 20, page 19 line 27, page 20, line 24, page 21 lines 5, 7, 9, and 11, page 25 line 11, page 27 line 2, and page 36 line 25, among others. Applicants cannot understand how Examiner could consider these concepts to be new matter, particularly with the numerous references to retraining throughout the specification. Accordingly, Applicants traverse Examiner's statement that now cancelled claims 31-33 and 41-43 presented new matter. Furthermore, Applicants respectfully request that Examiner review the entire specification before examining the new claims provided herein.

With regard to the Office Action, paragraph 3: New claims 46-65 are directed to statutory subject matter per 35 U.S.C. 101, and therefore Applicants traverse Examiner's rejection under 35 U.S.C. 101.

With regard to the Office Action, paragraphs 5-7: Examiner rejects Applicants claims based on 35 U.S.C. 103(a). Applicants remind Examiner that a prima facie case of obviousness under 35 U.S.C. 103(a) requires that there be some motivation to combine

references, that there is a likelihood of success of the combination, and that the combination include all the features of the Applicants' claim. The motivation for combination must be evident *in the references*. The Examiner fails to show a prima facie case of obviousness.

More particularly, Examiner fails to show where the features of Applicants' independent claims 46 and 57 are indicated in the references, and namely Applicants' features of providing two signatures based on two time periods, where the distinct second time period is consecutive to the first time period, shorter than the first time period, and more recent than the first time period. The Examiner also fails to show where, in either of Gillick et al. or Hunt et al., there is a suggestion or motivation to combine the features of the two references. Accordingly, Applicants contend that even if Examiner could provide such motivation for combination, such combination does not include Applicants' features that include providing two signatures based on two time periods, where the distinct second time period is consecutive to the first time period, shorter than the first time period, and more recent than the first time period.

Applicants thus traverse Examiner's rejection based on 35 U.S.C. 103(a) based on Examiner's failure to provide a prima facie case of obviousness. Applicants accordingly consider claims 46 and 57 to be allowable. All other claims depend from claims 46 or 57, and are hence also allowable.

The claim amendments provided herein should in no way be construed to be an acquiescence to any of the rejections. The amendments to the claims are being made solely to expedite the prosecution of the above-identified application. Accordingly, none of the claim amendments are related to patentability or narrow the originally filed claims. Applicant reserves the option to further prosecute the same or similar claims in the instant or subsequent patent applications.

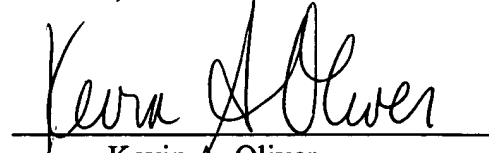
Conclusion

Based on the above Remarks, it is respectfully submitted that this application is in condition for allowance. Accordingly, allowance is requested. If there are any remaining issues or the Examiner believes that a telephone conversation with Applicant's attorney

would be helpful in expediting the prosecution of this application, the Examiner is invited to call the undersigned at 617-832-1241.

Respectfully submitted,

FOLEY, HOAG & ELIOT LLP

A handwritten signature in cursive script, reading "Kevin A. Oliver", is written over a horizontal line.

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MARKED-UP VERSION OF CLAIMS

Please cancel claims 1-6, 8, 10-45. Please add new claims 46-65.

46. (New) A method of forming a classifier, the method comprising:
- providing a first time period,
 - providing a distinct second time period wherein the distinct second time period is consecutive to the first time period, shorter than the first time period, and more recent than the first time period,
 - forming a first signature from data collected during a period based on the first time period,
 - forming a distinct second signature from data collected during a period based on the distinct second time period,
 - training a first neural network based on the first signature and the distinct second signature.
47. (New) A method according to claim 46, further comprising providing an architecture for the first neural network.
48. (New) A method according to claim 46, further comprising evaluating the performance of the neural network.
49. (New) A method according to claim 46, further comprising retraining the first neural network.
50. (New) A method according to claim 46, further comprising:
- providing a performance threshold, and,
 - retraining the first neural network based on a comparison of the performance threshold and a performance evaluation of the neural network.
51. (New) A method according to claim 46, further comprising updating the first signature based on a weighted average of the distinct second signature.
52. (New) A method according to claim 46, further comprising,

training a distinct second neural network based on an updated version of the first signature.

53. (New) A method according to claim 52, further comprising
evaluating the distinct second neural network, and
based on the evaluation, utilizing the distinct second neural network as a
replacement for the first neural network if the distinct neural
54. (New) A method according to claim 46, wherein at least one of forming a
first signature and forming a distinct second signature include collecting call
detail records (CDRs).
55. (New) A method according to claim 46, wherein at least one of forming a
first signature and forming a distinct second signature include specifying
parameters upon which at least one of the first signature and the distinct
second signature are to be formed.
56. (New) A method according to claim 46, wherein at least one of the first
signature and the distinct second signature is based on at least one of
percentage of calls made and position of a portion in the time period during
which the data is received.
57. (New) A method of classifying data, the method comprising:
training a first neural network based on the first signature and the distinct
second signature, the first signature based on data from a first time
period, the distinct second signature based on data from a distinct
second time period that is consecutive to the first time period,
shorter than the first time period, and more recent than the first time
period,
forming a recent signature based on data collected during a recent time
period of the same duration as the distinct second time period, and,
presenting the recent signature to the first neural network.

58. (New) A method according to claim 57, further comprising retraining the first neural network.
59. (New) A method according to claim 57, further comprising:
- providing a performance threshold, and,
 - retraining the first neural network based on a comparison of the performance threshold and a performance evaluation of the neural network.
60. (New) A method according to claim 57, further comprising updating the first signature based on at least one of a weighted average of the distinct second signature and a weighted average of the recent signature.
61. (New) A method according to claim 46, further comprising,
- training a distinct second neural network based on an updated version of the first signature.
62. (New) A method according to claim 61, further comprising
- evaluating the distinct second neural network, and
 - based on the evaluation, utilizing the distinct second neural network as a replacement for the first neural network.
63. (New) A method according to claim 57, wherein at least one of the a first signature and the distinct second signature are formed based on call detail records (CDRs).
64. (New) A method according to claim 57, further including specifying parameters upon which at least one of the first signature and the distinct second signature are to be formed.
65. (New) A method according to claim 57, wherein at least one of the a first signature and the distinct second signature are formed based on at least one of percentage of calls made and position of a portion in the time period during which the data is received.